Review for Reliable Data Transfer Protocol Design

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How to Design RDT Protocol?

- RDT 1.0 : reliable networks
- RDT 2.0: bit-errors (checksum + ACKs/NAKS)
  - RDT 2.1: Garbled ack msgs, using sequence number 0 and 1
  - RDT 2.2: NAK-free, by carrying seq # in acks
- RDT 3.0: message loss + bit errors
  - Timeout mechanism
  - Stop and Wait (SAW) protocol
  - Low utilization, how to get this?

Pipelined Protocols

- Goal: Improve utilization by allowing senders to send multiple packets introducing slide windows

- Go-Back-N

- Selective Repeat

- Difference?